APPENDICES

A - Conceptual Snowmaking Water Impoundment Design
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ARIZONA SNOWBOWL

Coconino National Forest
Peaks Ranger District

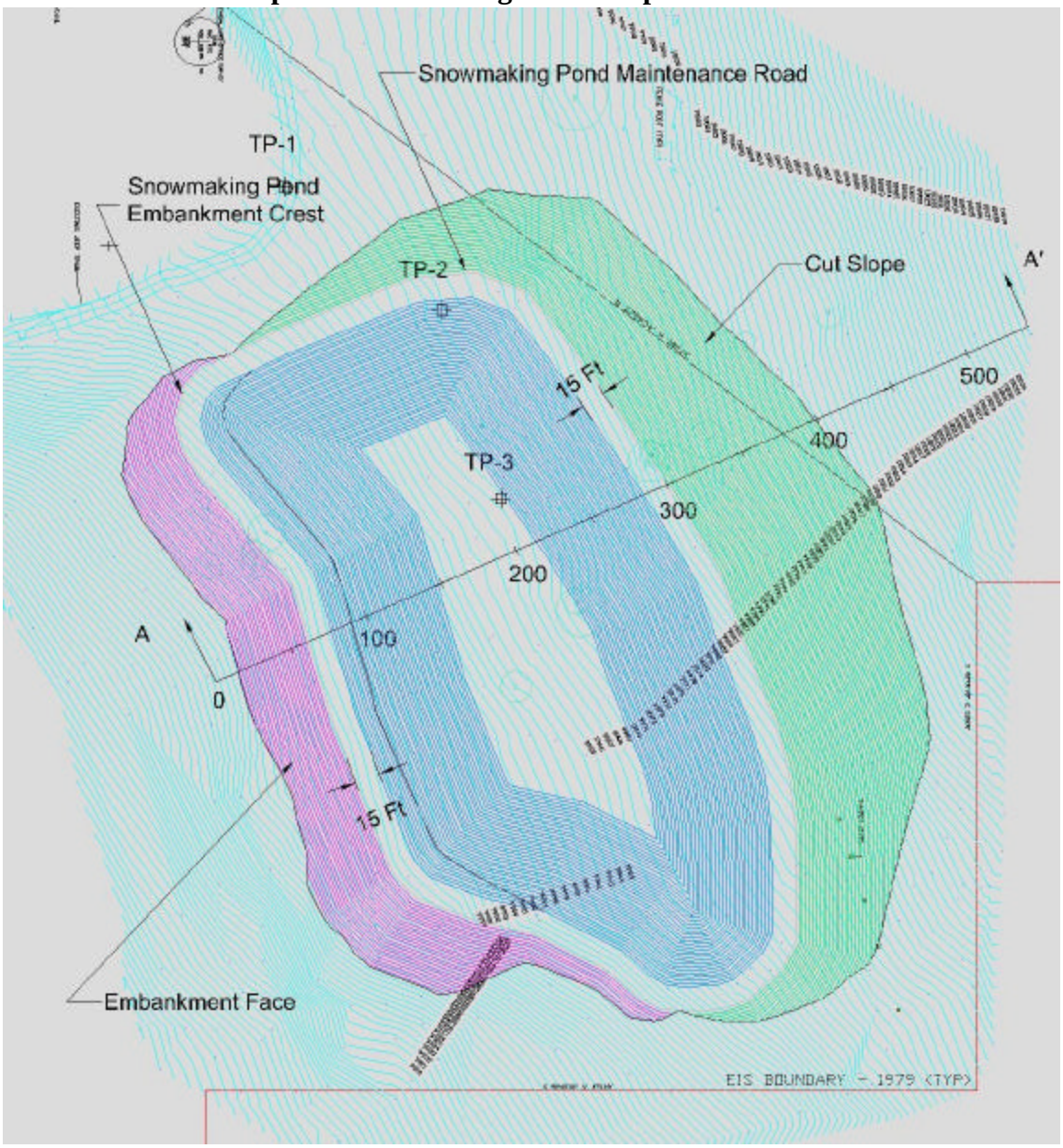
APPENDIX A – CONCEPTUAL SNOWMAKING WATER IMPOUNDMENT DESIGN

In order to complete a proper stability analysis and dam breach model, it is necessary to prepare a conceptual design layout of the snowmaking water impoundment facility.

DESIGN LAYOUT

The snowmaking water impoundment is proposed to be located just below (and to the south of) the ridgeline along the southern edge of the SUP area – near the top terminal of the existing Sunset Chairlift. The proposed impoundment is to be a geosynthetic lined pond with an earthen embankment. Figure A-1 shows the approximate layout of the pond and embankment. The conceptual design assumes a 15-foot wide embankment crest and a 15-foot wide access road around the perimeter of the pond for maintenance access. The crest elevation is 9,957 feet above AMSL. The impoundment floor is at 9,922 feet above AMSL, with 2:1 (horizontal to vertical) side slopes. The downstream face of the embankment is also at 2:1.

Figure A-1
Proposed Snowmaking Water Impoundment Site

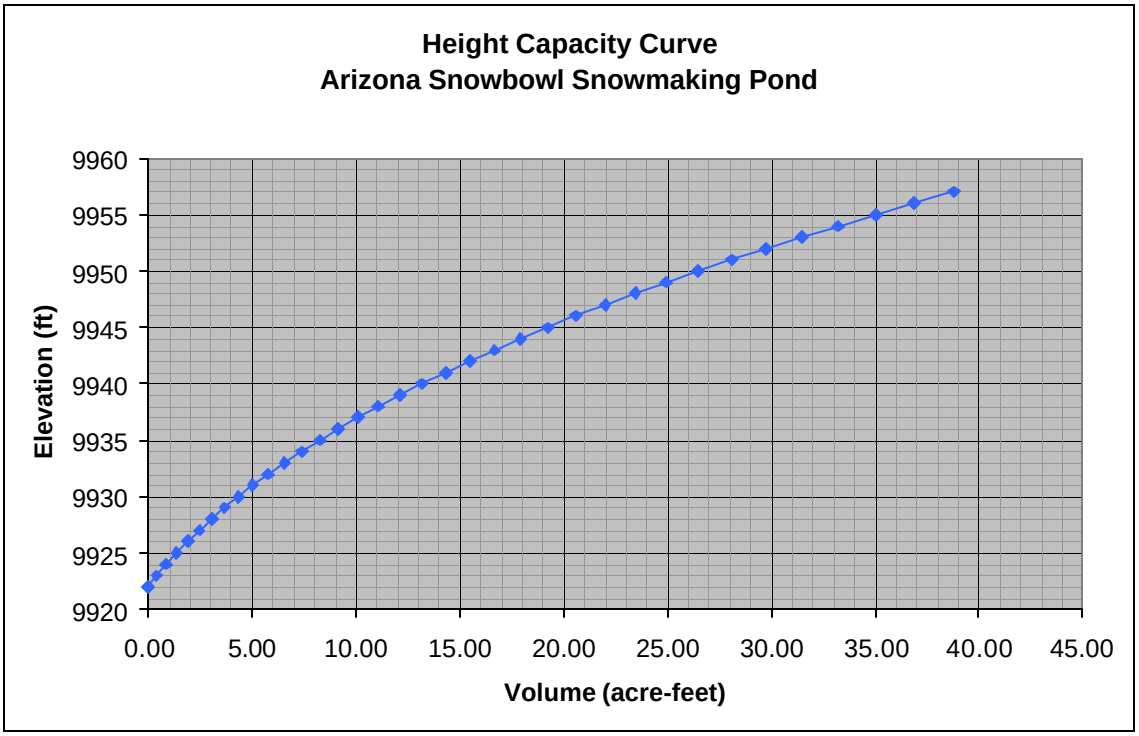


The embankment height from crest to toe is 24.5 feet. Maximum possible storage (to the embankment crest) is 38.8 acre feet. This makes the structure a non-jurisdictional dam in the State of Arizona. (less than 25-foot crest to toe embankment height and less then 50 acre feet of storage). Although the structure would not have to be permitted as a jurisdictional dam, the State of Arizona would still have a notification requirement.

It is assumed that the embankment would be a simple, homogeneous embankment and that all materials used in the embankment construction would be generated on site from excavation in the proposed impoundment area. Based on the layout shown in Figure A-1, and the assumptions described above, the pond excavation would generate approximately

120,880 bank cubic yards (CY) of debris. Assuming a 15 percent shrinkage factor during compaction, the embankment would require approximately 12,300 CY of debris for construction. This produces an excess of cut on the order of 108,580 CY that would need to be disposed of in grading operations elsewhere – either on- or off-site. Soils encountered in the test pit excavations contained cobbles and boulders ranging from five percent to 20 percent of the excavated volume. Cobbles eight inches and larger must be excluded from any fill material used in dam embankment construction due to compaction restrictions and the overall percentage of cobbles (particles over three inches in diameter) must be such that cobbles are not allowed to nest (group together). Therefore, some processing of fill material should be anticipated during construction. Due to the large imbalance in cut to fill volumes, it is not anticipated that any difficulty would be encountered in creating a sufficient volume of fill material meeting gradation specifications for compaction. Due to the depth of excavation required to achieve storage of 10,000,000 gallons of water, it should be anticipated that excavation would encounter zones of large boulders, weathered bedrock requiring ripping for removal, and, in the deepest portions of the pond, hard, unweathered bedrock that could require blasting for removal.

Figure A-2
Snowmaking Pond Height Capacity Curves



The recommended liner would be a 60 mil High Density Polyethylene (HDPE). Since the impoundment would store only clear water with no undesirable constituents, there are no environmental consequences to leakage (with respect to water quality). Therefore, a composite liner system (HDPE overlying a compacted clay bedding layer) would not be necessary and the local sand could be used as bedding for the HDPE liner. Any bedrock, boulders, or cobbles exposed during the pond excavation should be removed and/or

covered with not less than six inches of sand with not more than 30 percent by weight gravel sizes and a maximum particle size not greater than ¾-inch. It is not necessary to protect HDPE from ultraviolet light, although covering the plastic may further extend its useful life.

Exposed plastic on a 2:1 slope presents a problem for wildlife. The water in the impoundment would almost certainly attract local wildlife that would attempt to drink at the edge. The plastic is very slippery and animals can easily slip into the pond. Once they are in the water it is almost impossible for them to climb back out of the impoundment and drowning is likely. This hazard can be mitigated by fencing wildlife out (although the smaller animals are difficult to exclude in this way). An alternative to fencing is to cover the plastic with soil. However the interface friction between HDPE and soil is commonly in the range of 14° to 18° and soil will not stay on the surface of a 2:1 slope (26.5°) or even at a 3:1 slope (18.4°). An expandable geocell grid filled with the local sand and gravel would keep the soil in place and provide a surface conducive to both wildlife and operating personnel. The geocell surface would also provide a buffer against the greatest post-construction puncture risk which is ice loading.

This storage facility will require an Operation & Maintenance inspection by a qualified Forest Service engineer on an annual basis. Timing of said inspection shall be such to allow correction of discovered safety deficiencies prior to the immediately following season of operation. Inspection criteria shall be according to current safety criteria and engineering state-of-art judgment, and manual FSM 7500 direction. In addition, there shall be completed within three calendar days after any event of any unusual event; such as an earthquake of Richter magnitude 5.0 or greater within a twenty-mile radius of the event epicenter, in the event of an overtopping event, or at the discretion of the Forest Service. The Forest Service shall be notified by the facility owner/operator in the event of any unusual facility operational behavior or physical characteristic.

SITE INVESTIGATION

Three test pits were excavated at the site of the proposed snowmaking water impoundment using a small backhoe. The location of each test pit (TP1, TP2 and TP3) is shown on Figure A-1. The test pits permitted inspection of the near surface soil profile and the sampling of the on-site soils for laboratory testing.

The observed soil profiles would be described as follows:

TEST PIT #1

- 0 to two feet - Loose to medium dense, fine to medium grained well graded to silty sand (SM), brown, colluvial soil with root mass (scattered roots to three feet) and three to eight inches of poor topsoil.
- Two to 10 feet – Medium dense to dense, fine to medium grained well graded to silty sand (SM), brown, colluvial soil with occasional cobbles and boulders (less than five percent).
- Refusal hard silty fine sand, gray (weathered rock) at 10 feet.

TEST PIT #2

- 0 to 1.2 feet - Loose to medium dense, fine to medium grained well graded to silty sand (SM), brown, colluvial soil with root mass (scattered roots to three feet) and eight to 12 inches of topsoil.
- 1.2 to 10 feet – Medium dense to dense, fine to medium grained well graded to silty sand with gravel (GC/GM), brown, colluvial soil with cobbles and boulders (15% +/-). Cobbles and boulders range from three inches to 18 inches in diameter, six inches diameter typical. Increasing clay content with depth.
- Refusal on boulders and weathered rock at 10 feet.

TEST PIT #3

- 0 to 2.5 feet - Loose to medium dense, fine to medium grained well graded to silty sand (SM), brown, colluvial soil with root mass (scattered roots to three feet) and eight to 12 inches of topsoil.
- 2.5 to eight feet – Medium dense to dense, fine to medium grained well graded to silty sand with gravel (GM), brown, colluvial soil with cobbles and boulders (20 percent +). Cobbles and boulders range from three inches to 36 inches in diameter, 12 inches diameter typical. Nested boulders at four to five feet.
- Refusal on boulders and weathered rock at eight feet.

Bulk samples of the colluvial soil were obtained from each test pit and submitted for particle size analysis/plasticity testing. All samples were found to be non-plastic (no significant clay content) with the exception of TP2 which contained measurable amounts of a low plasticity clay (Liquid Limit (LL) of 23 and Plasticity Index (PI) of 6). Particle size analyses include two samples from test pits excavated at an alternate site located to the southwest and at significantly lower elevation (the glade site). Soils at this alternate site were similar but somewhat finer grained.

SITE HYDROLOGY

Detailed design of spillways and other hydraulic control structures is beyond the scope of this study. The proposed snowmaking water impoundment site is located near the ridgeline and has only a very small contributing area upslope. A 15-foot wide roadway required for construction and maintenance is proposed to completely surround the impoundment. A small diversion ditch along the outside edge of this road would intercept and completely remove any flow from the very small basin upstream of the impoundment. Therefore, there is not anticipated to be a significant contribution of runoff to the impoundment from upslope areas. A small emergency spillway structure should be included in the southeastern abutment of the embankment to protect the structure against overtopping from operator errors or equipment failures during impoundment filling and from direct precipitation within impoundment limits during extreme events.

SLOPE STABILITY

Slope stability models were developed and analyzed for the downstream embankment of the snowmaking water impoundment site. While site-specific laboratory testing of the on-site soils for shear strength parameters has not been performed, for this conceptual level design effort, conservative assumptions have been made for the shear strength parameters. The following shear strength characteristics have been assigned:

- For the native non-plastic sands above the weathered bedrock surface, a friction angle of 28° and cohesion of 500 pounds per square foot (psf).
- For the compacted sands in the pond embankment, a friction angle of 30° and cohesion of 800 psf.
- For zones containing nested boulders and weathered bedrock, a friction angle of 45° and cohesion of 500 psf.
- For the bedrock materials, no specific shear strength was assigned, however, failure surfaces were constrained from penetrating the bedrock surface.

Analyses were performed using a computer assisted limit equilibrium model called SLOPE/W. The slope stability analysis that was performed indicates that the required stability criteria are met by all of the conditions analyzed.

The stability results for the observed range of conditions on site (a slope range of five to 50 percent, 20 to 40 percent typical) indicate that the Snowbowl's trails are very stable, even at the upper slope range of 50 percent. High artesian pressures would be required to induce instability in the soil layer, even at a grade of 50 percent. The presence of an abundance of woody vegetation tends to increase the stability of near surface, shallow slopes due to the reinforcing effect of root structure.

APPENDIX B – PROPOSED FOREST PLAN AMENDMENT

FOREST SERVICE DIRECTION FOR AMENDING FOREST PLANS

Forest Service requirements for amending forest plans are included in agency regulations and policies. These require that proposed activities be consistent with forest plans and that proposed activities which may be in conflict with the Forest Plan either be denied, modified (so as to be consistent), or that the Forest Plan be amended. Regulations at 36 CFR 219.10(f) directs the Forest Service to consider whether a proposed amendment to a forest plan would be considered a significant change.

The Forest Service is authorized to implement amendments to forest plans in response to changing needs and opportunities, information identified during project analysis, or the results of monitoring and evaluation. The process to consider Forest Plan amendments, review them for significance, document results, and reach a decision is contained in Forest Service Manual (FSM) 1922 and Forest Service Handbook (FSH) 1909.12, Chapter 5. An assessment of a proposed amendment's significance in the context of the larger Forest Plan is a crucial part to the process. It is important to note that the definition of significance for amending a forest plan (36 CFR 219.10(f) and FSH 1922.5) is not the same significance as defined by NEPA. Under NEPA, significance is determined by whether a proposal is considered to be a "major federal action significantly affecting the quality of the human environment,"[1] or whether the relative severity of the environmental impacts would be significant based on their context and intensity.[2]

In contrast, the National Forest Management Act (NFMA) requires that proposed Forest Plan amendments be evaluated for whether they would constitute a significant change in the long-term goods, outputs, and services projected for an entire National Forest. Amendments that are not significant may be adopted following disclosure and notification in an environmental document, such as an EA, EIS, or a supplement to one of these documents.

The criteria to analyze the significance of a Forest Plan amendment are summarized below.[3] Each of the four criteria for determining significance of the proposed amendment is responded to directly later.

1. Timing. When the change in the Forest Plan would take place relative to the planning period and scheduled revisions of the plan.

[1] 40 CFR 1502.3

[2] 40 CFR 1508.27

[3] USDA-FS, 1992, Forest Service Handbook 1909.12

2. Location and size. Location and size of the area affected compared to the size for the overall planning area.

3. Goals, Objectives, and Outputs. How, or to what degree, the amendment would affect the long-term relationship between levels of goods and services projected by the Forest Plan.

4. Management Prescription. Whether the change would apply only to a specific situation, or to future situations across the planning area.

PROPOSED AMENDMENT TO THE CNF FOREST PLAN

In order to respond to changing needs and opportunities on the Forest since the Forest Plan was adopted in 1987, a minor, non-significant Forest Plan amendment has been incorporated into the Proposed Action. This Forest Plan amendment is for Management Area 15 – Developed Recreation Sites, and, specifically, pertains to facility development at the Arizona Snowbowl.

As indicated in Management Area 15, current management emphasis for Developed Recreation Sites states that: "Facility development at the Snow Bowl ski area is guided by the Final Environmental Impact Statement of 1979."[4]

Because the Final Environmental Impact Statement of 1979 did not provide for unforeseen future guest and operational amenities such as snowmaking and developed snowplay at the Snowbowl, the management emphasis is proposed to be sufficiently broadened to allow for such projects. This Forest Plan amendment would allow Snowbowl and the Forest Service to address key portions of the stated purpose and need, which include:

Purpose #1

- providing a reliable and consistent operating season, helping to stabilize Snowbowl's investment, increase local employment levels, and boost winter tourism within the community

Purpose #2

- developing a managed and professionally designed snowplay/tubing facility at the ski area to fill the demonstrated public demand for snowplay

Therefore, to allow current and potential future proposals at the Snowbowl to be in compliance with Forest Plan direction, the Proposed Action includes replacing the following management emphasis on page 188 of the Forest Plan:

> *Current management emphasis for Developed Recreation Sites states that "Facility development at the Snow Bowl ski area is guided by the Final Environmental Impact Statement of 1979."*

[4] USDA Forest Service, 1987, pg. 188

With the following statement:

> *Facility Development at the Arizona Snowbowl Ski Area is guided by the Final Environmental Impact Statement of 1979 and subsequent site-specific environmental analyses resulting in an updated Master Development Plan*.

As per FSH 1909.12, the four criteria for determining significance of the proposed amendment are responded to directly.

1. Timing. When the change in the Forest Plan would take place relative to the planning period and scheduled revisions of the Plan.

   The CNF is currently in the very initial steps of undertaking a formal Forest Plan revision process. A Notice of Intent to prepare and Environmental Impact Statement (NOI) is not scheduled to be submitted to the Federal Register until 2006, with a *potential* Record of Decision (ROD) in 2009. Therefore, because the completion of the Forest Plan revision process is not imminent, this non-significant Forest Plan amendment is being proposed at an appropriate time.

2. Location and size. Location and size of the area affected compared to the size for the overall planning area.

   The CNF includes approximately 1,821,495 contiguous acres in north central Arizona. This proposed Forest Plan amendment would pertain to NFS lands within Snowbowl's existing 777-acre SUP area only, representing approximately 0.04 percent of the Forest.

3. Goals, Objectives, and Outputs. How, or to what degree, the amendment would affect the long-term relationship between levels of goods and services projected by the Forest Plan.

   This amendment intends to improve the long-term relationship between levels of goods and serves projected by the Forest Plan. As per the Forest Plan and the SUP, Snowbowl's permit area is managed for developed recreation. This proposed Forest Plan amendment is consistent with the developed recreation theme, and is not anticipated to negatively impact the long-term relationship between levels of good and services in any way.

4. Management Prescription. Whether the change would apply only to a specific situation or to future situations across the planning area.

   The proposed Forest Plan amendment is specific to the Snowbowl SUP area within Management Area 15. This amendment would not apply to the entire Management Area or any other current or future situations on the CNF.

Subsequent to issuance of the Final EIS and ROD, Snowbowl will be required to prepare and submit an updated Approved Master Development Plan document which corresponds to the final approved alternative. The Approved Master Development Plan will guide the future development of the Snowbowl.

APPENDIX C – CUMULATIVE EFFECTS TABLES

Tables C-1 and C-2 provide information on past, present and reasonably foreseeable future activities that were utilized in the cumulative effects analyses provided in Chapter 3.

Table C-1
Cumulative Effects Matrix
Past, Present and Reasonably Foreseeable Future Projects

Project	Location	Description	Status	Potentially Affected Resource	Units of measure
Kachina Peaks Wilderness	Peaks	Designation of Wilderness Area will result in diminished land use activities such as logging, mining, and road-building.	Designated 1985	▪ Cultural ▪ Recreation ▪ Visual ▪ Wildlife	18,705 acres
White Vulcan Mine Settlement and Reclamation	Eastern slope of Peaks	Reclamation and closure of the White Vulcan Mine. This project is located on the opposite side of San Francisco Mountain from the Snowbowl operations.	Ongoing, to be completed by 2010.	▪ Cultural ▪ Visuals ▪ Wildlife ▪ Watershed	130 acres
San Francisco Mountain Mineral Withdrawal	All of Peaks except Wilderness	The Peaks and surrounding area was withdrawn from availability for mineral entry in 2000. The designated area of special protection totals approximately 74,381 acres. This will limit potential ground disturbing activities associated with mining operations. This action precludes individuals and entities from staking a mineral claim in preface to planned extraction activities within the withdrawn area.	Completed 2000	▪ Cultural ▪ Visuals ▪ Recreation ▪ Wildlife ▪ Soils ▪ Watershed ▪ Economics	75 acres
Snowbowl Road Parking Restriction	Snowbowl Road	Parking along the Snowbowl Road in the winter is restricted and enforced, snow play at Snowbowl and along road closed.	Ongoing	▪ Cultural ▪ Recreation ▪ Traffic ▪ Social	12 miles

Table C-1
Cumulative Effects Matrix
Past, Present and Reasonably Foreseeable Future Projects

Project	Location	Description	Status	Potentially Affected Resource	Units of measure
Peaks Nomination to National Register	Peaks Withdrawal area	The Forest Service is in the process of completing a National Register nomination for the Peaks as a Traditional Cultural Property (TCP). The area to be designated as a TCP would be inclusive of the Arizona Snowbowl SUP and would encompass 74,380.5 acres of NFS lands.	2004 nomination process will be complete	▪ Cultural	74,381 acres
Peaks Segment of the Arizona Trail	Western slopes of Peaks	Designate and construct a non-motorized trail from Sandy Seep to Kelly Tank (Peaks Segment). The segment is approximately 31.0 miles, traveling north between Hart Prairie and the Kachina Peaks Wilderness to Kelly Tank. Includes the additional trailhead at the Snowbowl parking area and a 0.4-mile connector trail that includes a short interpretive trail loop at the trailhead.	Pending DN/FONSI as of December 2003	▪ Cultural ▪ Recreation ▪ Wildlife	Approximately 31 miles
Bebbs Willow Restoration Project	Lower Hart Prairie	Using prescribed burning, tree thinning, soils and water rehabilitation to restore Bebbs willow-wet meadow community. The objective is to improve the hydrologic function in the 170-acre Fern Mountain Botanical Area by increasing groundwater availability in the shallow perched aquifer and springs that support the riparian habitat.	NEPA decision 2001 Implementation ongoing	▪ Vegetation ▪ Cultural ▪ Watershed ▪ Soils ▪ Air quality	600 Acres
Fort Valley Restoration Project	Lower south and west slopes of Peaks	Involves restoration of forest lands in and around the urban Flagstaff interface by using tree thinning, prescribed burning, and road and trail management techniques. The effects of the proposed Fort Valley Ecosystem Restoration are limited to the local area and the techniques of tree thinning, prescribed burning, and road and trail management proposed for Fort Valley Ecosystem and has been determined to not have significant environmental impacts.	NEPA decision 2000, implementation ongoing	▪ Fire ▪ Vegetation ▪ Wildlife ▪ Visual ▪ Air quality	9,100 Acres

Table C-1
Cumulative Effects Matrix
Past, Present and Reasonably Foreseeable Future Projects

Project	Location	Description	Status	Potentially Affected Resource	Units of measure
Veit Springs Land Exchange	Adjacent to Snowbowl Road	Forest Service Acquiring 160 acres of land owned by AZ Game and Fish.	NEPA decision 2003 currently stayed by lawsuit	▪ Cultural ▪ Recreation	160 acres
Transwestern Lateral Pipeline Project	West Flagstaff to Snowbowl Road	Constructed in 1992, this pipeline project brought natural gas service to the eastern portion of Fort Valley. There is on-going operation, maintenance, and construction activities for the 6 inch natural gas pipeline, which extends through Forest Service land for a distance of six miles within a 50 foot right-of-way.	Construction 1992	▪ Vegetation ▪ Soils ▪ Watershed ▪ Wildlife ▪ Economics	6 miles 50' ROW
Snowbowl Wireless Telephone Communications Site	Snowbowl SUP area at Maintenance Shop	Installation of a 125-foot tall cellular tower near Snowbowl's maintenance shop was approved via a Decision Notice in August 2000. However, it has not been constructed. It is assumed that this facility will be eventually constructed independent of any actions taken by the ski area.	NEPA complete in 2000, facilities have not been built. Construction expected in 2004	▪ Visuals ▪ Cultural ▪ Economics	0.2 Acre VQO
Inner Basin Water Pipeline Development and Maintenance	Inner Basin/east side of Peaks to Schultz Pass	*Existing* pipeline under permit to City of Flagstaff. Annual repair and maintenance including pipeline replacement activities.	Ongoing/Maintenance only	▪ Cultural ▪ Wildlife ▪ Soils ▪ Watershed	20 Miles 30' ROW
Private Land Development	Lower Hart Prairie	Residential and summer home development exists on private lands in Hart Prairie, downhill from the Snowbowl facility. These homes are primarily used during the summer months, as no winter road access exists. Currently, there are approximately 13 summer homes developed in the lower Hart Prairie area. Additionally there are approximately four parcels of land which could potentially be developed as home sites.	Ongoing	▪ Cultural ▪ Recreation ▪ Visuals ▪ Wildlife ▪ Soils ▪ Watershed ▪ Vegetation ▪ Noise ▪ Water quality ▪ Traffic	Acres

Table C-1
Cumulative Effects Matrix
Past, Present and Reasonably Foreseeable Future Projects

Project	Location	Description	Status	Potentially Affected Resource	Units of measure
		Development is presently limited and likely to remain low density due to Coconino County zoning restrictions and availability of land and water supplies.		▪ Economics	
Miscellaneous/ongoing Recreational Uses	Peaks Area	Ongoing recreational use of the area including weddings, reunions, recreation events, hiking, bicycling, OHV use, vehicle travel on misc, horseback riding, cross-country skiing, dirt roads, camping, hunting. The USFS has developed best management practices to mitigate current and future recreational land uses.	Ongoing	▪ Recreation ▪ Cultural ▪ Visuals ▪ Wildlife ▪ Soils ▪ Watershed ▪ Vegetation ▪ Noise ▪ Traffic ▪ Economics ▪ Social ▪ Noise	PAOT
Power line Maintenance	Power line from Snowbowl Road to permit area	Ongoing maintenance activities including clearing of hazard trees.	Ongoing	▪ Wildlife ▪ Cultural ▪ Noise ▪ Vegetation	5 miles 50' ROW
Inner Basin Well Field	Inner Basin of the Peaks	Operation of the Inner Basin well field as part of Flagstaff's potable water system. This lies outside of the proposed areas of snowmaking and associated snowmelt runoff from Snowbowl operations.	Ongoing since turn of the century	▪ Watershed ▪ Cultural	Acre feet
Snowbowl Road Paving	Snowbowl Road	Reconstruction and paving of the road.	Construction competed in 1988	▪ Cultural ▪ Recreation, ▪ Visual ▪ Wildlife ▪ Traffic ▪ Noise	12 miles

Table C-1
Cumulative Effects Matrix
Past, Present and Reasonably Foreseeable Future Projects

Project	Location	Description	Status	Potentially Affected Resource	Units of measure
Various Aspen Regeneration and exclosure fences	Peaks area	Fencing of aspen areas to promote regeneration.	Ongoing	▪ Vegetation ▪ Wildlife ▪ Visual	400 Acres
Use of city reclaimed water	Flagstaff area	Use of reclaimed water for irrigation. Reclaimed water for the Snowbowl would not be available for other reuse. City of Flagstaff Utilities Department records (2003) indicate there are only limited demands for reclaimed water during the winter months when diversion to Snowbowl would occur.	Ongoing	▪ Watershed ▪ Water Quality	Acre feet of water used
City Water Well Fields	Flagstaff area aquifers	Operation and continued development of the City of Flagstaff domestic water supply.	Ongoing	▪ Watershed	Acre feet
Miscellaneous improvement projects along Highway 180	Highway 180 between Flagstaff and Snowbowl	Miscellaneous imp rovements increasing visibility, safety and speed limits.	1990 to 2000	▪ Traffic	N/A
Grand Canyon Traffic	Highway 180 between Flagstaff and the Grand Canyon	Seasonal (i.e., spring, summer and fall) traffic levels on Highway 180 attributable to attendance at the Grand Canyon.	Ongoing	▪ Traffic	ADT/AADT
Miscellaneous facilities and trail construction within Snowbowl's SUP area	Snowbowl SUP area	Construction of lifts, trails, buildings and parking areas between 1938 and present.	1938 to present	▪ Cultural ▪ Recreation ▪ Visuals ▪ Traffic ▪ Noise ▪ Vegetation ▪ Wildlife ▪ Soils	
Summer events held at Snowbowl	Snowbowl SUP area	Occasional events (weddings, concerts and festivals) held at Snowbowl throughout the summer	Ongoing	▪ Recreation	N/A

Table C-2
Development History Within the Snowbowl SUP Area: 1982-1999

Year	Project	
1982	1979 EIS appeal process completed & Preferred Alternative approved for development master plan that included:	▪ 206 acres of ski trails ▪ Comfortable Carrying Capacity (CCC) of 2825 ▪ Parking of 8.1 acres ▪ Base Lodge Capacity 1/3 of CCC or 940 seats ▪ Approval for total of five chair lifts and one Poma
1982	Hart Prairie Chairlift constructed.	
1982	Fairfield Communities purchases Snowbowl.	
1983	Construction of: Hart Prairie Lodge (14,000 sq. ft.), Sunset Chairlift and three ski trails totaling 26 acres.	
1986	Agassiz Chairlift replaced with new CTEC triple.	
1987	CNF Forest Plan approved; adopts Selected Alternative in 1979 EIS as management emphasis for Snowbowl.	
1988	Widening of Snowbowl Road and paving begins.	
1988	*Black Jack* (trail #17) constructed.	
1989	Snowbowl is listed for sale and continues to operate.	
1992	Fairfield Snowbowl sold to Arizona Snowbowl Limited Partnership. 40-year Special Use Permit issued.	
1993	Improvements to Hart Prairie lodge approved.	
1993	Categorical Exclusion signed for widening *Logjam* (trail #25).	
1994	Categorical Exclusion issued for miscellaneous improvements including: installing portable handle tow, replacing Hart Prairie Chairlift, new addition to Hart Prairie Lodge, new offices, and utility upgrades.	
1994	Completion of *Logjam* widening.	
1994	Master Concept Plan submitted, based on 1979 EIS.	
1995	Completion of Hart Prairie Lodge addition; ticket offices, retail store, drop off, ADA ramps, deck, and rental shop expansion.	
1997	(June) Construction of *Lava* (trail #41a) and *Volcano* (trail #43c) via Categorical Exclusion. Approval also includes hiking trail from *Spur Catwalk* (trail #27) to *Midway* (trail #24) and the widening of *Spur Catwalk*, which were not completed.	
1997	(October) Scoping letter sent to public notifying Snowbowl's intention to implement projects approved in 1979 EIS. Previously-approved projects to be analyzed under an EA.	
1997	(November) EA open house at Snowbowl.	
1997	(December) Second EA open house at City Hall, due to public outcry on proposal.	
1998	(February) Question of TCP arises and review of bulletin 38 by USFS, discussion on NHPA, SHPO, eligibility questions.	
1998	(February) Work on EA suspended.	